

Translation

PATENT COOPERATION TREATY

PCT

INTERNATIONAL PRELIMINARY EXAMINATION REPORT

(PCT Article 36 and Rule 70)

Rec'd PCT/PTO 22 SEP 2004
PCT Application
PCT/JP2002/002817



Applicant's or agent's file reference NG001PCT	FOR FURTHER ACTION See Notification of Transmittal of International Preliminary Examination Report (Form PCT/IPEA/416)	
International application No. PCT/JP02/02817	International filing date (day/month/year) 22 March 2002 (22.03.02)	Priority date (day/month/year)
International Patent Classification (IPC) or national classification and IPC A01H 5/00, C12N 15/09		
Applicant NATIONAL AGRICULTURAL RESEARCH ORGANIZATION		

1. This international preliminary examination report has been prepared by this International Preliminary Examining Authority and is transmitted to the applicant according to Article 36.
2. This REPORT consists of a total of <u>5</u> sheets, including this cover sheet. <input checked="" type="checkbox"/> This report is also accompanied by ANNEXES, i.e., sheets of the description, claims and/or drawings which have been amended and are the basis for this report and/or sheets containing rectifications made before this Authority (see Rule 70.16 and Section 607 of the Administrative Instructions under the PCT). These annexes consist of a total of <u>4</u> sheets.
3. This report contains indications relating to the following items: I <input checked="" type="checkbox"/> Basis of the report II <input type="checkbox"/> Priority III <input checked="" type="checkbox"/> Non-establishment of opinion with regard to novelty, inventive step and industrial applicability IV <input type="checkbox"/> Lack of unity of invention V <input checked="" type="checkbox"/> Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement VI <input type="checkbox"/> Certain documents cited VII <input type="checkbox"/> Certain defects in the international application VIII <input type="checkbox"/> Certain observations on the international application

Date of submission of the demand 17 March 2003 (17.03.03)	Date of completion of this report 13 November 2003 (13.11.2003)
Name and mailing address of the IPEA/IP	Authorized officer
Facsimile No.	Telephone No.

INTERNATIONAL PRELIMINARY EXAMINATION REPORT

International Application No.

PCT/JP02/02817

I. Basis of the report

1. With regard to the elements of the international application:*

- ☐ the international application as originally filed
- ☒ the description:
pages _____ 1-50 _____, as originally filed
pages _____, filed with the demand
pages _____, filed with the letter of _____
- ☒ the claims:
pages _____ 2-7, 9-11, 13-15, 17, 20, 21 _____, as originally filed
pages _____, as amended (together with any statement under Article 19
pages _____, filed with the demand
pages _____ 1, 8, 12, 16, 19, 22-27 _____, filed with the letter of _____ 04 August 2003 (04.08.2003)
- ☒ the drawings:
pages _____ 1-7 _____, as originally filed
pages _____, filed with the demand
pages _____, filed with the letter of _____
- ☒ the sequence listing part of the description:
pages _____ 1-11 _____, as originally filed
pages _____, filed with the demand
pages _____, filed with the letter of _____

2. With regard to the language, all the elements marked above were available or furnished to this Authority in the language in which the international application was filed, unless otherwise indicated under this item.
These elements were available or furnished to this Authority in the following language _____ which is:

- ☐ the language of a translation furnished for the purposes of international search (under Rule 23.1(b)).
- ☐ the language of publication of the international application (under Rule 48.3(b)).
- ☐ the language of the translation furnished for the purposes of international preliminary examination (under Rule 55.2 and/or 55.3).

3. With regard to any nucleotide and/or amino acid sequence disclosed in the international application, the international preliminary examination was carried out on the basis of the sequence listing:

- ☐ contained in the international application in written form.
- ☒ filed together with the international application in computer readable form.
- ☐ furnished subsequently to this Authority in written form.
- ☐ furnished subsequently to this Authority in computer readable form.
- ☐ The statement that the subsequently furnished written sequence listing does not go beyond the disclosure in the international application as filed has been furnished.
- ☒ The statement that the information recorded in computer readable form is identical to the written sequence listing has been furnished.

4. ☐ The amendments have resulted in the cancellation of:

- ☐ the description, pages _____
- ☐ the claims, Nos. _____
- ☐ the drawings, sheets/fig _____

5. ☐ This report has been established as if (some of) the amendments had not been made, since they have been considered to go beyond the disclosure as filed, as indicated in the Supplemental Box (Rule 70.2(c)).**

* Replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this report as "originally filed" and are not annexed to this report since they do not contain amendments (Rule 70.16 and 70.17).

** Any replacement sheet containing such amendments must be referred to under item 1 and annexed to this report.

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III. Non-establishment of opinion with regard to novelty, inventive step and industrial applicability

1. The questions whether the claimed invention appears to be novel, to involve an inventive step (to be non obvious), or to be industrially applicable have not been examined in respect of:

☐ the entire international application.

☒ claims Nos. 22-27

because:

☐ the said international application, or the said claims Nos. relate to the following subject matter which does not require an international preliminary examination (*specify*):

☐ the description, claims or drawings (*indicate particular elements below*) or said claims Nos. are so unclear that no meaningful opinion could be formed (*specify*):

☐ the claims, or said claims Nos. are so inadequately supported by the description that no meaningful opinion could be formed.

☒ no international search report has been established for said claims Nos. 22-27

2. A meaningful international preliminary examination cannot be carried out due to the failure of the nucleotide and/or amino acid sequence listing to comply with the standard provided for in Annex C of the Administrative Instructions:

☐ the written form has not been furnished or does not comply with the standard.

☐ the computer readable form has not been furnished or does not comply with the standard.

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Supplemental Box

(To be used when the space in any of the preceding boxes is not sufficient)

Continuation of : III

1. The subject matters of claims 22-27 are newly added by the written amendment received after the opinion was reported.

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V. Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

1. Statement

Novelty (N)	Claims	2, 5-7, 13, 18-21	YES
	Claims	1, 3, 4, 8-12, 14-17	NO
Inventive step (IS)	Claims		YES
	Claims	1-21	NO
Industrial applicability (IA)	Claims	1-21	YES
	Claims		NO

2. Citations and explanations

Document 1: US, 6031151, A (John Draper), 29 February, 2000 (29.02.00)

Document 2: R. Boivin, et al., Genome, 1993, Vol. 36, No. 1, pages 139-146

Document 3: JP, 2001-17176, A (President of Kyoto University), 23 January, 2001 (23.01.01)

Document 4: JP, 2002-65263, A (Toyobo Co., Ltd.), 5 March, 2002 (05.03.02)

Document 5: WO, 89-10396, A (Plant Genetic Systems, N.V.), 2 November, 1989 (02.11.89)

Claims 1, 4, 8, 9, 11, 12, 15 and 16

The subject matters of claims 1, 4, 8, 9, 11, 12, 15 and 16 do not appear to be novel in view of document

1.

Document 1 describes a callus-specific promoter, and also describes to the effect that a callus-specific promoter was isolated using the data (Fig. 1) concerning the frequency of cDNA clones specific to injury sites/calluses in the library prepared from the mRNAs carefully produced from *Asparagus officinalis* cells.

Claims 1, 3, 8-10, 12, 14, 16 and 17

The subject matters of claims 1, 3, 8-10, 12, 14, 16 and 17 do not appear to be novel in view of document

2.

Document 2 describes to the effect that the cDNA library obtained from the leaves of *Arabidopsis thaliana* was differentially screened to isolate a leaf-specific cDNA that did not react with the probes prepared from roots, seeds, or flower buds, but hybridized with the probes prepared from leaves. The document also describes to the effect that the N-terminal portion of the said cDNA is a promoter.

Claims 1-19 and 21

The subject matters of claims 1-19 and 21 do not appear to involve an inventive step in view of documents 1-3 and 5.

Document 3 describes to the effect that the PsBTPase participating in the information transfer of the protection system of a plant is introduced into the plant for the purpose of letting the plant have disease resistance.

Document 4 describes a promoter that controls to allow expression selectively in stamen cells.

A person skilled in the art could have easily conceived of using the promoters allowing expression specifically in such sites as leaves and calluses of plants of documents 1, 2 and 4, in order that the disease-resistant genes of document 3 and the genes used for synthesizing nutrients such as vitamins and sugars can be expressed selectively in the intended sites of plants.

Claim 20

The subject matter of claim 20 does not appear to involve an inventive step in view of documents 1-4.

Document 4 describes a method for analyzing the expressed amounts of different genes of two cells using a DNA array.

It is not considered difficult to use the expressed gene amount analyzing method using a DNA array of document 4 for examining the specificity in promoter-expressing sites.